

## Storage Multipath Management in a Virtual Computer System

### ABSTRACT OF THE DISCLOSURE

A virtual computer system, including one or more virtual machines (VMs), is  
5 connected to a redundant data storage system having multiple paths for routing data  
between the computer system and the data storage system. The VMs are supported by  
a kernel, which includes a resource manager for allocating system resources among the  
VMs, including data storage space and data storage bandwidth. A storage path  
manager (SPM) is integrated into the kernel for routing data between the computer  
10 system and the data storage system, including providing functions such as failovers and  
failbacks, as well as load distribution. Integrating the SPM into the kernel improves the  
kernel's ability to manage the VMs and to provide SAN resources to the VMs. For  
example, the SPM may enhance the isolation between multiple VMs by routing their  
respective data over different data paths. Also, the SPM may improve the allocation of  
15 system resources by coordinating with the resource manager.